

# Mineral Industry Surveys

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## COPPER IN SEPTEMBER 2003

Average daily mine production rose slightly in September but remained below the higher level established in June and July owing to low production at one mine in Arizona. Mine production for the first 9 months of 2003 was 23,000 metric tons (t), 2.7%, lower than production for the same period in 2002. While average daily refinery production rose by about 5% in September, year-to-date production was down by 13%. Combined shipments of wire-rod mill and brass mill products rose to the highest level of the year, yet remained below shipments for September 2002. Year-to-date mill shipments were down by 9% from the same period in 2002.

Copper prices inched up in September; the month-end and average monthly COMEX spot price were both about \$0.82 per pound of copper. At the beginning of October, however, prices began a steep climb, breaking through to \$0.90 per pound during the third week in the month, the highest level since September 2000. The price climb continued through the first week of November, with the COMEX spot price peaking at almost \$0.96 per pound on November 4 before stalling. Along with a continued slide in global commodity exchange inventories, which declined from 1.29 million metric tons (Mt) at yearend 2002 to 0.90 Mt by the end of October, several industry events helped to sustain the higher prices. On October 16, a fire at one of four solvent extraction plants at Phelps Dodge Corp.'s Morenci Mine threatened to significantly reduce output. Phelps Dodge announced, however, that by October 19, full production had been restored (Phelps Dodge Corp., 2003). More significant, however, was a pronouncement on June 29 by Phelps Dodge that it had no immediate plans to restart about 250,000 to 300,000 metric tons per year of curtailed capacity in the United States. According to the company, any decision to restart all or part of the closed capacity would be "predicated on a number of factors" including prices, projected world supply and demand balances, and "internal needs and shareholder interests" (Platts Metals Week, 2003).

Internationally, several production cutbacks were also announced in October. On October 9, a major pitwall slippage at Freeport-McMoRan Copper & Gold Inc.'s Grasberg Mine in

Papua, Indonesia, killed eight miners and severely disrupted production. Freeport revised annual copper sales projections downward for 2003 by about 32,000 t, to 635,000 t. The company anticipated government approval to resume normal operations by the end of November (Freeport-McMoRan Copper & Gold Inc., 2003). On October 15, Noranda Inc. announced a series of measures aimed at restoring profitability to its Horne smelter in Quebec, Canada, including decreasing annual production by 20% (41,000 t). According to the company, strengthening of the Canadian dollar against the U.S. dollar has reduced its revenues by almost 15% since the beginning of 2003 because it receives most of its revenue in U.S. dollars. In addition to exchange rates, Noranda cited historically low treatment and refining charges and depletion of local ore reserves as factors impacting its profitability (Noranda Inc., 2003).

Wolverine Tube, Inc. announced plans to close its Booneville, MS, facility, which produces both enhanced and smooth bore industrial tube for residential and commercial air conditioner manufacturers. Lackluster product demand and improved performance at its Jackson, TN, plant were cited by the company as reasons for closure. Transfer of production to Jackson and its other plants in Oklahoma and Alabama was anticipated over several months (Wolverine Tube, Inc., 2003).

## References Cited

- Freeport-McMoRan Copper & Gold Inc., 2003, Freeport-McMoRan Copper & Gold Inc. updates activities at its Grasberg mining operations: New Orleans, LA, Freeport-McMoRan Copper & Gold Inc. news release, November 26, 1 p.
- Noranda, Inc., 2003, Noranda's Horne smelter announces measures to regain profitability: Rouyn-Noranda, Quebec, Canada, Noranda, Inc. press release, October 15, 2 p.
- Phelps Dodge Corp., 2003, Morenci production fully restored; Phelps Dodge expects to meet fourth-quarter production target: Phoenix, AZ, Phelps Dodge Corp. news release, October 20, 1 p.
- Platts Metals Week, 2003, Phelps Dodge keeps cuts in place, optimistic on 2004: Platts Metals Week, v. 74, no. 44, November 3, p. 1.
- Wolverine Tube, Inc., 2003, Wolverine Tube announces closing of facility and reduction in workforce: Huntsville, AL, Wolverine Tube, Inc. press release, September 30, 2 p.

TABLE 1  
SALIENT STATISTICS OF THE COPPER INDUSTRY IN THE UNITED STATES<sup>1</sup>

(Metric tons, unless otherwise specified)

	Source table <sup>2</sup>	2002 <sup>p</sup>	2003		
			August	September	January - September
Production:					
Primary:					
Mine, recoverable	(2)	1,140,000	94,800	93,800	833,000
Refinery:					
Electrolytic:					
Domestic	(4)	801,000	55,900	57,400	508,000
Foreign	(4)	40,000 <sup>3</sup>	W	W	W
Electrowon	(4)	601,000	50,600	50,600	446,000
Total	(4)	1,440,000	107,000	108,000	954,000
Secondary recoverable copper:					
Refineries	(5)	69,900	3,910	4,230	40,700
Ingot makers <sup>4</sup>	(5)	122,000	10,200	10,200	91,500
Brass and wire-rod mills	(5)	735,000	55,400	56,700	509,000
Foundries, et. <sup>4</sup>	(5)	64,800	5,400	5,400	48,600
Smelter, total	(3)	683,000	49,200	46,000	399,000
Consumption:					
Apparent	(8)	2,610,000	196,000	NA	NA
Refined (reported)	(7)	2,360,000	198,000	201,000	1,710,000
Purchased copper-base scrap	(9)	1,260,000	94,200 <sup>r</sup>	96,400	870,000
Stocks at end of period:					
Total refined	(11)	1,030,000	771,000 <sup>r</sup>	741,000	XX
Blister, etc.	(11)	44,400	47,900	44,500	XX
Prices:					
U.S. producer cathode (cents per pound) <sup>5</sup>	(12)	75.805	84.165	86.03	80.785
Imports: <sup>6</sup>					
Ores and concentrates <sup>7</sup>	(14)	71,900	--	NA	NA
Refined	(14)	927,000	78,100	NA	NA
Exports: <sup>6</sup>					
Ores and concentrates <sup>7</sup>	(15)	23,000	63	NA	NA
Refined	(15)	26,600	4,080	NA	NA

<sup>p</sup>Preliminary. <sup>r</sup>Revised. -- Zero. NA Not available. W Withheld to avoid disclosing company proprietary data; included in "Domestic." XX Not applicable.

<sup>1</sup>Data are rounded to no more than three significant digits, except prices; may not add to totals shown.

<sup>2</sup>Numbers in parentheses refer to the significant tables where these data are located.

<sup>3</sup>January-April only; excludes withheld data.

<sup>4</sup>Monthly data and 2002 cumulative data estimated based on 2001 monthly average.

<sup>5</sup>Source: Platts Metals Week.

<sup>6</sup>Source: U.S. Census Bureau.

<sup>7</sup>Copper content.

TABLE 2  
MINE PRODUCTION OF RECOVERABLE COPPER IN THE UNITED STATES<sup>1</sup>

(Metric tons)

Period	Recoverable copper			Contained copper		
	Arizona	Others <sup>2</sup>	Total	Electrowon	Concentrates <sup>3</sup>	Total
2002: <sup>p</sup>						
January - September	576,000 <sup>r</sup>	280,000	856,000 <sup>r</sup>	454,000 <sup>r</sup>	413,000	867,000 <sup>r</sup>
September	62,700	34,500	97,200	48,900	49,700	98,600
October	62,200	32,000	94,200	48,600	46,800	95,500
November	62,500	32,800	95,300	47,100	49,400	96,500
December	66,500	30,500	96,900	50,500	47,700	98,200
Year	767,000	375,000	1,140,000	601,000	557,000	1,160,000
2003:						
January	62,400	28,600	91,100	49,900	42,300	92,200
February	55,800	26,700	82,500	45,900	37,600	83,500
March	64,100	33,300	97,300	52,000	46,600	98,500
April	59,800	27,600	87,400	47,400	41,100	88,500
May	62,400	31,300	93,700	50,400	44,400	94,800
June	65,100	29,400	94,600	49,600	46,400	96,000
July	63,900	34,200	98,100	49,500	50,100	99,600
August	63,400	31,400	94,800	50,600	45,400	95,900
September	59,800	34,000	93,800	50,600	44,300	94,900
January - September	557,000	277,000	833,000	446,000	398,000	844,000

<sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes production from Idaho, Missouri, New Mexico, and Utah.

<sup>3</sup>Includes copper content of precipitates and other metal concentrates.

TABLE 3  
COPPER PRODUCED AT SMELTERS IN  
THE UNITED STATES, BY SOURCE<sup>1, 2</sup>

(Metric tons, copper content)

Period	Anode production
2002: <sup>p</sup>	
January - September	509,000
September	54,400
October	59,800
November	57,500
December	56,500
Total	683,000
2003:	
January	54,200
February	42,300
March	35,700
April	29,700
May	46,000
June	49,700
July	46,600
August	49,200
September	46,000
January - September	399,000

<sup>p</sup>Preliminary.

<sup>1</sup>Includes blister, anode and copper from primary or secondary sources.

<sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

TABLE 4  
PRODUCTION OF REFINED COPPER, BY SOURCE AND METHOD OF RECOVERY<sup>1</sup>

(Metric tons)

Period	Primary materials				Scrap	Total refined
	Electrolytically refined <sup>2</sup>		Electrowon	Total		
	Domestic <sup>3</sup>	Foreign				
2002: <sup>P</sup>						
January - September	596,000	40,000	454,000 <sup>r</sup>	1,090,000 <sup>r</sup>	53,800 <sup>r</sup>	1,140,000 <sup>r</sup>
September	66,100	W	48,900	115,000	4,820	120,000
October	73,100	W	48,600	122,000	7,120	129,000
November	67,900	W	47,100	115,000	5,120	120,000
December	64,600	W	50,500	115,000	3,930	119,000
Year	801,000	40,000 <sup>3</sup>	601,000	1,440,000	70,000	1,510,000
2003:						
January	69,800	W	49,900	120,000	4,500	124,000
February	60,500	W	45,900	106,000	3,910	110,000
March	60,700	W	52,000	113,000	5,680	118,000
April	46,600	W	47,400	94,000	6,150	100,000
May	46,100	W	50,400	96,500	4,050	101,000
June	53,400	W	49,600	103,000	4,130 <sup>r</sup>	107,000 <sup>r</sup>
July	57,900	W	49,500	107,000	4,140 <sup>r</sup>	111,000 <sup>r</sup>
August	55,900	W	50,600	107,000	3,920 <sup>r</sup>	110,000 <sup>r</sup>
September	57,400	W	50,600	108,000	4,240	112,000
January - September	508,000	W	446,000	954,000	40,700	995,000

<sup>P</sup>Preliminary. <sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data; included in "Domestic."

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Based on source of material at smelter level.

<sup>3</sup>January-April only; excludes withheld data.

TABLE 5  
COPPER RECOVERABLE IN UNALLOYED AND ALLOYED FORM FROM PURCHASED COPPER-BASE SCRAP<sup>1</sup>

(Metric tons, copper content)

Period	Refineries <sup>2</sup>		Ingot makers <sup>3</sup>		Brass and wire-rod mills		Foundries, etc. <sup>3</sup>		Total <sup>4</sup>
	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	
2002: <sup>P</sup>									
January - September	29,000 <sup>r</sup>	24,700 <sup>r</sup>	20,800 <sup>r</sup>	70,700 <sup>r</sup>	550,000 <sup>r</sup>	14,400	17,800 <sup>r</sup>	30,800 <sup>r</sup>	759,000 <sup>r</sup>
September	2,940	1,870	2,310	7,850	63,800	1,190	1,980	3,420	85,400
October	3,390	3,720	2,310	7,850	54,100	1,080	1,980	3,420	77,900
November	2,110	3,010	2,310	7,850	54,500	2,110	1,980	3,420	77,300
December	1,980	1,950	2,310	7,850	56,900	1,110	1,980	3,420	77,500
Year	36,500	33,400	27,800	94,200	716,000	18,700	23,700	41,100	991,000
2003:									
January	1,410	3,080	2,310	7,850	63,000	1,470	1,980	3,420	84,500
February	1,210	2,700	2,310	7,850	54,200	1,270	1,980	3,420	74,900
March	1,340	4,340	2,310	7,850	55,400	732	1,980	3,420	77,400
April	1,340	4,810	2,310	7,850	53,100	1,380	1,980	3,420	76,200
May	1,340	2,710	2,310	7,850	54,000	1,310	1,980	3,420	75,000
June	1,340	2,790 <sup>r</sup>	2,310	7,850	56,000	1,200	1,980	3,420	76,900
July	1,340	2,800 <sup>r</sup>	2,310	7,850	52,300	1,140	1,980	3,420	73,200
August	1,340	2,580 <sup>r</sup>	2,310	7,850	54,400	996	1,980	3,420	74,800
September	1,340	2,900	2,310	7,850	55,300	1,370	1,980	3,420	76,500
January - September	12,000	28,700	20,800	70,700	498,000	10,900	17,800	30,800	689,000

<sup>P</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Electrolytically refined and fire-refined scrap based on source of material at smelter level.

<sup>3</sup>Monthly data and 2002 cumulative data estimated based on 2001 annual data.

<sup>4</sup>Does not include an estimate, based on reported 2001 data, of 3,190 tons per month from new scrap and 2,010 tons per month from old scrap of copper recovered from scrap other than copper-base.

TABLE 6  
PRODUCTION, SHIPMENTS, AND STOCKS OF BRASS AND WIRE-ROD SEMIFABRICATES<sup>1</sup>

(Metric tons, gross weight)

Period	Production		Shipments		Stocks, end of period	
	Brass mills	Wire-rod mills	Brass mills	Wire-rod mills	Brass mills	Wire-rod mills
2002: <sup>p</sup>						
January - September	1,120,000 <sup>r</sup>	1,320,000	1,120,000 <sup>r</sup>	1,330,000	XX	XX
September	124,000	145,000	122,000	148,000	53,200	18,600
October	127,000	158,000	125,000	155,000	55,800	20,900
November	114,000	138,000	116,000	129,000	53,400	28,900
December	106,000	108,000	103,000	108,000	56,200	29,000
Year	1,470,000	1,720,000	1,460,000	1,720,000	XX	XX
2003:						
January	119,000	140,000	120,000	139,000	55,200	29,500
February	110,000	133,000	110,000	132,000	55,600	30,200
March	115,000	139,000	114,000	132,000	59,700	37,300
April	115,000	127,000	115,000	127,000	59,500	37,200
May	111,000	125,000	112,000	129,000	58,200	33,400
June	114,000	126,000	114,000	125,000	57,700	34,800
July	110,000	123,000	113,000	126,000	54,900	31,400
August	113,000	140,000 <sup>r</sup>	113,000	142,000 <sup>r</sup>	54,500	29,900 <sup>r</sup>
September	117,000	145,000	117,000	147,000	53,900	27,500
January - September	1,020,000	1,200,000	1,030,000	1,200,000	XX	XX

<sup>p</sup>Preliminary. <sup>r</sup>Revised. XX Not applicable.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

TABLE 7  
CONSUMPTION OF REFINED COPPER<sup>1</sup>

(Metric tons)

Period and item	Wire-rod mills	Brass mills	Other plants <sup>2</sup>	Total
2002: <sup>p</sup>				
January - September <sup>r</sup>	1,310,000	456,000	44,600	1,810,000
September	143,000	50,900	4,950	199,000
October	151,000	50,200	4,950	206,000
November	142,000	46,300	4,950	193,000
December	113,000	40,600	4,950	159,000
Year	1,710,000	593,000	59,400	2,360,000
2003:				
January	137,000	47,200	4,950	189,000
February	140,000	49,600	4,950	195,000
March	142,000	50,000	4,950	197,000
April	129,000	49,500	4,950	184,000
May	133,000	49,900	4,950	188,000
June	130,000	50,400	4,950	185,000
July	122,000	49,500	4,950	176,000
August	144,000	48,800	4,950	198,000
September:				
Cathodes	147,000	36,200	1,140	185,000
Wire bars	--	--	(3)	(3)
Ingots and ingot bars	--	--	1,690	1,690
Cakes and slabs	--	(3)	(3)	(3)
Billets and other	W	12,000	2,120	14,100
Total	147,000	48,200	4,950	201,000
January - September	1,230,000	443,000	44,600	1,710,000

<sup>p</sup>Preliminary. <sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data included with "Cathodes." -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not added to totals shown.

<sup>2</sup>Consumption by ingot makers, chemical plants, foundries, and miscellaneous manufacturers is estimated based on 2001 annual data.

<sup>3</sup>Withheld to avoid disclosing company proprietary data; included with "Billets and others."

TABLE 8  
U.S. APPARENT CONSUMPTION OF COPPER<sup>1</sup>

(Metric tons)

Period	Refined copper production	Copper in old scrap <sup>2</sup>	Refined general imports <sup>3</sup>	Refined exports <sup>3</sup>	Stock change during period	Apparent consumption
2002: <sup>p</sup>						
January - August	975,000 <sup>r</sup>	140,000 <sup>r</sup>	748,000	22,700	82,100 <sup>r</sup>	1,760,000 <sup>r</sup>
August	119,000	17,400	98,200	2,550	(7,350)	239,000
September	115,000	16,400	64,000	1,320	(4,620)	199,000
October	122,000	18,100	91,500	606	(14,300)	245,000
November	115,000	18,400	74,900	506	6,190	202,000
December	115,000	16,400	83,000	1,460	4,580	208,000
Year	1,440,000	210,000	1,060,000	26,600	74,000	2,610,000
2003:						
January	120,000	17,900	61,500	2,540	(23,300)	220,000
February	106,000	17,300	64,700	766	(69,200)	257,000
March	113,000	18,400	52,500	1,510	2,950	179,000
April	94,000	19,500	52,200	606	(571)	166,000
May	96,500	17,300	56,000	15,900	(70,600)	224,000
June	103,000	17,300	51,500	23,000	(59,200)	208,000
July	107,000	17,200	40,700	5,080	(35,500)	196,000
August	107,000	16,900	72,700	4,080	(3,600)	196,000
September	108,000	17,600	NA	NA	(30,200)	NA
January - August	846,000	142,000	452,000	53,500	(259,000)	1,640,000

<sup>p</sup>Preliminary. <sup>r</sup>Revised. NA Not available.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes reported monthly production of copper from old scrap of copper-base, an estimate for annual reporters, and a monthly average of copper from non-copper-base materials based on 2001 data.

<sup>3</sup>Source: U.S. Census Bureau.

TABLE 9  
CONSUMPTION OF PURCHASED COPPER-BASE SCRAP<sup>1</sup>

(Metric tons, gross weight)

Period	Smelters and refineries		Ingot makers <sup>2</sup>		Brass and wire-rod mills <sup>3</sup>		Foundries, etc. <sup>2</sup>		Total scrap used
	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	
2002: <sup>p</sup>									
January - September	28,700 <sup>r</sup>	26,200 <sup>r</sup>	33,200 <sup>r</sup>	97,900 <sup>r</sup>	701,000 <sup>r</sup>	14,900	31,500 <sup>r</sup>	33,300 <sup>r</sup>	966,000 <sup>r</sup>
September	3,000	1,960	3,690	10,900	81,500	1,250	3,500	3,700	110,000
October	3,450	2,490	3,690	10,900	69,100	1,130	3,500	3,700	97,900
November	2,130	3,270	3,690	10,900	68,600	2,160	3,500	3,700	97,900
December	2,100	1,990	3,690	10,900	71,900	1,160	3,500	3,700	98,900
Year	36,400	33,900	44,300	131,000	910,000	19,300	42,000	44,400	1,260,000
2003:									
January	1,430	3,130	3,690	10,900	79,700	1,510	3,500	3,700	108,000
February	1,230	2,730	3,690	10,900	68,100	1,320	3,500	3,700	95,100
March	1,350	4,000	3,690	10,900	70,000	781	3,500	3,700	97,900
April	1,350	5,440	3,690	10,900	65,900	1,420	3,500	3,700	95,900
May	1,350	2,750	3,690	10,900	67,300	1,350	3,500	3,700	94,500
June	1,380	2,790 <sup>r</sup>	3,690	10,900	69,600	1,240	3,500	3,700	96,800 <sup>r</sup>
July	1,390	2,780 <sup>r</sup>	3,690	10,900	64,600	1,170	3,500	3,700	91,700 <sup>r</sup>
August	1,350	2,600 <sup>r</sup>	3,690	10,900	67,400	1,030	3,500	3,700	94,200 <sup>r</sup>
September	1,350	2,920	3,690	10,900	68,900	1,410	3,500	3,700	96,400
January - September	12,200	29,100	33,200	97,900	622,000	11,200	31,500	33,300	870,000

<sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Monthly data and 2002 cumulative data estimated from 2001 annual data.

<sup>3</sup>Consumption at brass and wire-rod mills assumed equal to receipts.

TABLE 10  
CONSUMPTION OF PURCHASED COPPER-BASE SCRAP<sup>1,2</sup>

(Metric tons, gross weight)

Scrap type and processor	2002 <sup>p</sup>		2003		
	January - September	Year	August	September	January - September
No. 1 wire and heavy:					
Smelters and refiners	57,100 <sup>r</sup>	73,800	5,790	5,790	52,000
Brass and wire-rod mills	291,000 <sup>r</sup>	379,000	30,900	31,800	284,000
No. 2 mixed heavy and light:					
Smelters and refiners	32,700 <sup>r</sup>	43,000	2,840	2,360	24,200
Brass and wire-rod mills	4,760 <sup>r</sup>	6,630	620	564	4,320
Total unalloyed scrap:					
Smelters and refiners	89,800 <sup>r</sup>	117,000	8,630	8,150	76,200
Brass and wire-rod mills	296,000 <sup>r</sup>	386,000	31,500	32,400	288,000
Red brass: <sup>3</sup>					
All plants	40,500 <sup>r</sup>	53,100	4,440	4,250	38,500
Leaded yellow brass:					
All plants	260,000 <sup>r</sup>	340,000	24,800	25,700	233,000
Yellow and low brass:					
All plants	86,800 <sup>r</sup>	104,000	4,630	3,440	38,100
Cartridge cases and brass:					
Smelters and refiners	W	W	W	W	W
Brass mills	49,100 <sup>r</sup>	70,300	5,600	7,230	59,600
Auto radiators:					
Smelters and refiners	31,200 <sup>r</sup>	41,600	3,460	3,460	31,200
Bronzes:					
Smelters and refiners	8,760 <sup>r</sup>	11,700	973	973	8,760
Brass mills	9,470 <sup>r</sup>	12,600	380	396	4,040
Nickel-copper alloys:					
All plants	12,700 <sup>r</sup>	15,300	1,600	1,520	12,400
Low grade and residues:					
Smelters and refiners	10,500 <sup>r</sup>	14,000	1,170	1,170	10,500
Other alloy scrap: <sup>4</sup>					
Smelters and refiners <sup>5</sup>	1,660 <sup>r</sup>	2,200	184	184	1,660
Brass mills	5,240 <sup>r</sup>	6,980	356	337	2,870
Total alloyed scrap:					
Smelters and refiners	96,300 <sup>r</sup>	128,000	10,700	10,700	96,300
Brass mills	420,000 <sup>r</sup>	544,000	36,900	37,900	345,000
Total scrap:					
Smelters and refiners	186,000 <sup>r</sup>	245,000	18,500 <sup>r</sup>	18,900	173,000
Brass and wire-rod mills	716,000 <sup>r</sup>	930,000	68,500	70,300	633,000

<sup>p</sup>Preliminary. <sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data; included in "Other alloy scrap: Smelters and refiners."

<sup>1</sup>Does not include: consumption by foundries, chemical plants, and miscellaneous manufacturers, estimated to total about 7,290 tons of scrap per month in 2001; monthly data include estimates of about 14,600 tons of scrap per month consumed by ingot makers.

<sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>3</sup>Includes composition turnings, silicon bronze, zincy bronze, railroad car boxes, cocks and faucets, gilding metal, and commercial bronze.

<sup>4</sup>Includes refinery brass, beryllium copper, phosphor copper, and aluminum bronze.

<sup>5</sup>Includes items indicated by symbol W.

TABLE 11  
COPPER STOCKS AT END OF PERIOD<sup>1</sup>

(Metric tons)

Period	Crude copper <sup>2</sup>	Refined copper					LME <sup>6</sup>	Total refined
		Refineries <sup>3</sup>	Wire-rod mills <sup>3</sup>	Brass mills <sup>3</sup>	Other <sup>4</sup>	Comex <sup>5</sup>		
2002: <sup>p</sup>								
September	76,700	11,600	27,100	26,600	3,600	344,000	621,000	1,030,000
October	76,500	10,600	29,300	22,600	3,600	346,000	607,000	1,020,000
November	76,300	14,400	21,200	32,700	3,600	347,000	607,000	1,030,000
December	44,400	11,700	23,000	28,700	3,600	362,000	601,000	1,030,000
2003:								
January	44,100	6,300	37,900	29,700	3,600	360,000	570,000	1,010,000
February	46,800	3,720	23,000	23,600	3,600	340,000	544,000	938,000
March	47,100	5,270	33,500	23,100	3,600	330,000	545,000	941,000
April	41,900	3,770	40,300	17,900	3,600	351,000	524,000	940,000
May	46,900	7,160	42,500	16,100	3,600	305,000	495,000	869,000
June	45,800	4,750	36,200	21,500	3,600	291,000	453,000	810,000
July	42,300	4,820	28,400	24,400	3,600	282,000	431,000	775,000
August	47,900	5,310	21,100 <sup>r</sup>	20,800	3,600	276,000	444,000	771,000 <sup>r</sup>
September	44,500	4,100	22,800	20,000	3,600	271,000	419,000	741,000

<sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Copper content of blister and other materials in transit and in process of refining.

<sup>3</sup>Stocks of refined copper as reported; no estimates are made for nonrespondents.

<sup>4</sup>Monthly estimates based on 2001 annual data, comprising stocks at ingot makers, chemical plants, foundries, and miscellaneous manufacturers.

<sup>5</sup>Commodity Exchange Inc., New York.

<sup>6</sup>London Metal Exchange Ltd., U.S. warehouses.

TABLE 12  
AVERAGE PRICE OF COPPER IN THE UNITED STATES  
AND ON THE LONDON METAL EXCHANGE

(Cents per pound)

Period	U.S. producers delivered price cathode <sup>1</sup>	Comex first position <sup>2</sup>	LME cash price Grade A
2002:			
September	71.863	67.705	67.057
October	72.319	68.161	67.286
November	76.729	72.571	71.758
December	76.541	72.383	72.365
Year	75.805	71.672	70.721
2003:			
January	79.529	75.371	74.722
February	81.121	76.963	76.360
March	79.875	75.717	75.234
April	76.365	72.176	71.988
May	78.020	75.045	74.746
June	79.716	76.926	76.484
July	82.245	78.055	77.549
August	84.165	79.995	79.826
September	86.030	81.840	81.152
January - September	80.785	76.899	76.451

<sup>1</sup>Listed as "U.S. producer cathode."

<sup>2</sup>Listed as "Comex high grade first position."

Sources: Platts Metals Week and American Metal Market.



TABLE 13  
NEW YORK AVERAGE BUYING PRICES FOR COPPER SCRAP

(Cents per pound)

Month	Brass mills No. 1 scrap	Refiners No. 2 scrap	Dealers (New York)	
			No. 2 Scrap	Red brass turnings and borings
2002:				
September	66.80	55.68	40.80	37.00
October	66.83	56.70	39.09	37.00
November	71.38	60.50	41.00	37.00
December	71.60	61.31	41.00	37.00
Year	70.23	59.45	42.36	37.00
2003:				
January	73.67	62.38	46.90	37.33
February	75.55	63.95	52.00	38.00
March	74.69	64.26	52.00	38.00
April	70.82	61.80	49.41	38.00
May	73.95	64.53	49.00	38.00
June	76.29	67.36	49.00	38.00
July	73.86	65.00	46.77	36.27
August	79.48	69.43	49.00	38.00
September	81.96	72.75	54.43	38.00
January - September	75.59	65.72	49.83	37.73

Source: American Metal Market.

TABLE 14  
U.S. IMPORTS FOR CONSUMPTION OF COPPER (UNMANUFACTURED), BY CLASS<sup>1</sup>

(Metric tons, copper content)

Country or territory	Ore and concentrate			Matte, ash and precipitates			Blister and anodes			Refined		
	2003			2003			2003			2003		
	2002	August	January - August	2002	August	January - August	2002	August	January - August	2002	August	January - August
Belgium	--	--	--	--	--	46	--	--	--	34	--	--
Brazil	--	--	--	--	--	--	--	--	(2)	45,000	804	2,810
Canada	8,350	--	86	75	17	85	83,700	6,420	52,200	235,000	18,100	126,000
Chile	51,800	--	4,940	--	--	--	37,400	--	28,400	245,000	30,500	242,000
Germany	--	--	--	--	--	59	(2)	--	--	3,260	93	4,710
Indonesia	2,910	--	--	--	--	--	--	--	--	--	--	--
Malaysia	--	--	--	17	--	2	--	--	--	--	--	--
Mexico	4	--	3	324	34	364	16,200	948	6,630	57,200	1,460	16,500
Namibia	--	--	--	--	--	--	6,340	--	9,310	--	--	--
Peru	5,960	--	--	--	--	--	4,730	--	--	288,000	26,600	177,000
Russia	--	--	--	--	--	--	--	--	--	28,800	--	--
Taiwan	17	--	--	621	19	347	--	--	--	10	--	--
Turkey	2,910	--	--	--	--	--	--	--	--	--	--	--
United Kingdom	--	--	--	--	--	--	2	--	(2)	3,410	5	10,100
Other	2	--	--	2	--	6	70	--	--	21,900	556	4,620
Total	71,900	--	5,030	1,040	70	909	148,000	7,360	96,500	927,000	78,100	584,000

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 15  
U.S. EXPORTS OF COPPER (UNMANUFACTURED), BY CLASS<sup>1</sup>

(Metric tons, copper content)

Country or territory	Ore and concentrate			Matte, ash and precipitates			Blister and anodes			Refined		
	2003			2003			2003			2003		
	2002	August	January - August	2002	August	January - August	2002	August	January - August	2002	August	January - August
Australia	21	--	4	5	--	--	77	7	42	1,650	--	32
Belgium	42	--	82	12	--	39	179	--	--	--	--	2
Canada	17,500	55	6,760	2,560	310	2,830	17,700	989	10,900	3,130	75	1,470
China	1,110	6	194	63	(2)	132	515	30	412	14,900	20	39,800
Egypt	--	--	--	--	--	--	--	--	--	2,200	--	--
Germany	28	--	--	85	--	(2)	241	60	323	79	14	154
Hong Kong	25	--	26	160	--	--	2,600	278	1,750	38	6	29
India	9	--	--	153	5	175	83	20	88	825	62	900
Indonesia	--	--	13	--	--	--	99	20	103	--	--	--
Italy	--	--	--	--	--	--	208	22	138	56	15	32
Japan	36	--	99	1,330	--	25	40	--	84	48	4	202
Korea, Republic of	197	--	--	40	--	8	707	66	470	524	5	156
Mexico	2,620	--	210	12,400	229	7,380	38	62	241	135	3,800	8,250
Netherlands	38	--	--	35	--	1	1,100	--	--	16	--	--
Peru	1,230	--	214	39	--	--	--	--	--	--	--	--
Philippines	--	--	--	3	--	--	5,880	--	44	3	--	119
Singapore	60	2	3	(2)	3	4	614	45	307	7	10	48
Spain	--	--	18	4	--	(2)	259	60	359	6	--	5
Taiwan	80	--	11	104	--	--	1,000	100	659	1,630	--	1,980
United Arab Emirates	16	--	2	--	4	4	7	166	166	36	--	--
United Kingdom	16	--	35	65	8	58	469	22	236	527	4	36
Other	38 <sup>r</sup>	--	160	75 <sup>r</sup>	--	93	1,080 <sup>r</sup>	18	316	766 <sup>r</sup>	64	346
Total	23,000	63	7,830	17,100	559	10,700	32,900	1,970	16,600	26,600	4,080	53,500

<sup>r</sup>Revised. -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 16  
U.S. COPPER SCRAP TRADE<sup>1</sup>

(Metric tons, gross weight)

Country or territory	Imports						Exports					
	Unalloyed			Alloyed			Unalloyed			Alloyed		
	2003			2003			2003			2003		
	2002	August	January - August	2002	August	January - August	2002	August	January - August	2002	August	January - August
Barbados	229	20	162	18	4	4	--	--	--	--	--	--
Belgium	--	--	--	--	--	--	2,210	139	1,700	7,050	324	3,160
Canada	13,900	268	3,130	38,700	2,490	23,700	20,100	1,790	14,300	19,900	1,540	13,500
Chile	611	--	18	78	--	--	144	--	--	66	--	4
China	--	--	--	547	72	399	122,000	22,100	146,000	155,000	22,100	145,000
Costa Rica	1,100	89	560	458	47	253	--	--	--	2	--	6
Dominican Republic	1,360	60	759	884	53	509	--	--	--	--	--	4
Germany	118	5	15	1,110	566	2,730	14,200	935	5,900	16,400	750	5,850
Guatemala	536	23	322	1,190	81	660	--	--	--	(2)	--	--
Honduras	399	41	258	347	41	254	--	--	--	--	--	--
Hong Kong	3	--	--	--	--	--	7,180	443	1,580	6,140	876	5,810
India	--	--	--	(2)	18	18	3,920	438	3,910	43,500	3,520	32,500
Jamaica	362	44	428	239	18	97	--	--	--	--	--	--
Japan	97	11	61	193	--	261	11,000	472	4,910	9,120	862	7,040
Korea, Republic of	19	--	--	40	--	14	14,900	1,830	18,100	18,700	1,100	11,300
Malaysia	--	--	--	264	25	15	--	19	3,600	243	--	88
Mexico	9,250	946	5,310	18,300	1,550	11,700	2,280	257	1,750	248	--	538
Nicaragua	321	13	158	170	18	115	--	--	--	--	--	--
Norway	--	--	351	--	--	39	--	--	--	253	38	243
Panama	173	--	--	792	42	482	--	--	--	79	--	6
Taiwan	15	--	--	389	18	257	10,100	874	6,100	9,060	693	5,660
United Kingdom	155	19	161	1,760	55	506	17	--	--	1,380	78	680
Venezuela	93	21	33	2,090	201	677	--	--	--	--	--	--
Other	496 <sup>r</sup>	19	296	3,280 <sup>r</sup>	226	1,990	4,680 <sup>r</sup>	212	2,570	10,500 <sup>r</sup>	579	5,640
Total	29,300	1,580	12,000	70,900	5,520	44,700	213,000	29,600	210,000	298,000	32,500	237,000

<sup>r</sup>Revised. -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Less than 1/2 unit.

Source: U.S. Census Bureau.